Citgo Petroleum Corp
Citgo Petroleum Corp - Lake Charles Manufacturing Complex
Sulphur,Calcasieu Parish, Louisiana
Agency Interest Number: 1250

Louisiana Department of Environmental Quality (LDEQ)
Office of Environmental Services

STATEMENT OF BASIS

Lake Charles Manufacturing Complex – CLAW Area – Title V Initial
CITGO Petroleum Corporation
Sulphur, Calcasieu Parish, Louisiana
Agency Interest Number: 1250
Activity Number: PER19960009
Proposed Permit Number: 3009-V0

I. APPLICANT

Company:
Citgo Petroleum Corporation
P.O. Box 1562
Lake Charles, Louisiana 70602-1562

Facility:
CLAW Area
4401 Hwy 108 South
Sulphur, Calcasieu Parish, Louisiana
Approximate UTM coordinates are 468.50 kilometers East and 3338.50 kilometers North, Zone 15

II. FACILITY AND CURRENT PERMIT STATUS

Citgo Petroleum Corporation (CITGO) owns and operates a lube oil plant in Lake Charles, Louisiana designed to produce high quality lubrication oils and waxes for the transportation, manufacturing, and packaging industries. CITGO Lubes and Wax (CLAW) Area is classified under SIC Code 2911 for petroleum refineries. CLAW Area can produce lubricating oil base stocks and fully refined waxes. CLAW's feedstock comes from the refinery portion of the Lake Charles Manufacturing Complex (LCMC) which processes both domestic and foreign crude oils. An Initial Part 70 Consolidated Refinery Operating Permit was submitted by CITGO for the LCMC as well as the lube oil plant in October, 1996. To facilitate the permitting approval process, CITGO is submitting multiple operational area permits for the LCMC. There will be seven (7) operational area permits in total for the LCMC.

Title V Area	Description
Utilities 3010 –V0	Newly created Title V Area including cooling towers, flares, and rental equipment
CLAW 3009-V0	Formerly titled CIT-CON, includes furnaces, storage tanks, flare, and other miscellaneous sources

Citgo Petroleum Corp
Citgo Petroleum Corp - Lake Charles Manufacturing Complex
Sulphur,Calcasieu Parish, Louisiana
Agency Interest Number: 1250

Thermal 2930-V0	Includes furnaces, powerhouse boilers, Coker I Unit, COP Unit, and other miscellaneous sources
Reformer 2920-V0	Includes furnaces, Coker II Unit, CCR Vent, and other miscellaneous sources
AAT 2935-V0	Includes Sulfur Recovery Units, Tail Gas Units, Acid Plant, Thermal Oxidizer, and other miscellaneous sources
CAT 2908-V0	Includes furnaces, FCCU Vents, and other miscellaneous sources
Logistics 2796-V4	Includes storage tanks, wastewater emissions, marine loading and WWTP flares, and other miscellaneous sources

Title V Permit 2797-V0, dated September 9, 2002 will be partially superseded by this CLAW Area Title V permit.

The following permits will be completely superseded by this CLAW Area Title V permit and will remain active until other sources within these permits are fully covered by area wide Title V permits:

- Permit No. 0520-00016-01, dated November 10, 1988. ENCON I Project
- Permit No. 2173, dated January 4, 1993. Inert Gas Handling
- Permit No. 2215, dated September 14, 1993. Sour Water Surge Tank (CIT-CON)
- Permit No. 2403, dated August 10, 1996. MEK Solvent Dehydration

CITGO submitted timely applications from the initial Part 70 permits and continues to operate pursuant to the "application shield" provided in the program.

CITGO LCMC is a designated Part 70 source. Among above seven Part 70 permits four of them have been issued to the operating units within the LCMC. These include:

Permit No.	**Unit or Source**	**Date Issued**
2908 - V0	CAT Area	04/28/2005
2796 - V4	Logistics Area	02/20/2006
2935 - V0	AAT Area	10/17/2005
2920 – V0	Reformer	03/15/2006

Two Initial Title V permits are currently under public notice, they are:

2930 –V0	Thermal	Public Notice 03/10/2006 – 04/24/2006
3010 -V0	Utilities	Public Notice 02/17/2006 – 04/03/2006

In addition, the facility has several state permits and Title V permits that will remain effective until replaced by above seven Part 70 permits. These include:

Permit No.	Unit or Source	Date Issued
220	Fuel Oil Conversion	10/30/1973
254	Fuel Oil Conversion (1.0% Sulfur)	12/18/1973
310	LDPE Expansion	May 1974
311	Reactivation of Deasphalting Unit	05/02/1974
456	LDPE Expansion	May 1975
737	Modification-"D" Topping Unit	05/20/1977
796	Polyethylene Plant Expansion	09/07/1977
1168R	New "C" Reformer and Refinery Modification	08/10/1979
1594	New Coker, Unicracker, and Refinery Modification	07/27/1981
1770T	Use TAC monitoring sites (alter permit 254)	09/22/1982
0520-00016-01	ENCON I Project	11/10/1988
2003(M-1)	Isomerization Unit	02/21/2001
2131	C Reformer Benzene Recovery	04/20/1992
2173	Inert Gas Handling	01/04/1993
2204	Steam Enhancement Project	04/22/1993
2215	Sour Water Surge Tank (CIT-CON)	09/14/1993
2403	MEK Solvent Dehydration	08/10/1996
2595	C Topper/Straight Run PPR	02/12/1999
2615(M-1)	C Reformer Optimization Project	10/24/2001
2797-V0	CVEP	09/09/2002
2810-V1	Tier 2 – Cat Gasoline Hydrotreaters	10/01/2002
2714-V1	Coker I Unit	07/29/2003
74-V0	ALCOH Unit	12/22/2004
2715-V1	Mixed Xylenes Unit	07/27/2005

III. PROPOSED PROJECT/PERMIT INFORMATION

Application

A permit application was submitted on October 1, 1996 requesting a Part 70 operating permit for the CITGO LCMC. The application was subsequently revised on December 16, 2005. Additional information dated March 6, 2006 was also submitted.

Project

The primary objectives of this permit are to:

- Consolidate and replace existing air emission permits
- Identify and reconcile all existing air emission sources
- Incorporate Consent Decree requirements into permit
- Obtain an air emissions cap for process furnaces and boilers

The CLAW Area consists of the following process units:

Vacuum Distillation Unit I, Vacuum Distillation Unit II, Furfural Extraction Unit, Duo-Sol Extraction Unit, Methyl Ethyl Ketone (MEK) Dewaxing Unit I, Methyl Ethyl Ketone (MEK) Dewaxing Unit II, Wax Finishing Unit, Wax Slabbing Unit, Transfer and Product Movement Unit (Tank Farm), Steam Plant, and Waste Water Treatment Unit.

Proposed Permit

Permit 3009-V0 will be the initial Part 70 operating permit for the **CLAW Area**.

Permitted Air Emissions

Estimated emissions in tons per year are as follows:

Pollutant	Proposed[1]
PM_{10}	554.75
SO_2	6526.90
NO_X	2288.20
CO	484.55
VOC	1161.98

[1] Includes emissions from 4 existing state permits and Grandfathered sources.

IV REGULATORY ANALYSIS

The applicability of the appropriate regulations is straightforward and provided in the Specific Requirements section of the proposed permit. Similarly, the Monitoring, Reporting and Recordkeeping necessary to demonstrate compliance with the applicable terms, conditions and standards are also provided in the Specific Requirements section of the proposed permit.

Applicability and Exemptions of Selected Subject Items

See the proposed permit.

Prevention of Significant Deterioration/Nonattainment Review

The PM_{10}, SO_2, NOx, CO, and VOC emission increases will not exceed any PSD thresholds. Accordingly, PSD is not applicable to this permit.

Citgo Petroleum Corp
Citgo Petroleum Corp - Lake Charles Manufacturing Complex
Sulphur,Calcasieu Parish, Louisiana
Agency Interest Number: 1250

Streamlined Equipment Leak Monitoring Program

It is required that the CITGO CLAW Area comply with a streamlined equipment leak monitoring program. Compliance with the streamlined program shall serve to comply with each of the fugitive emission monitoring programs being streamlined.

For the CITGO CLAW Area, fugitive emissions are subject to the requirements of 40 CFR 63 Subpart CC, 40 CFR 60 Subpart GGG, Louisiana Refinery MACT (LAC 33:III.5109.A), and LAC 33:III.2122. Among these regulations, Louisiana Refinery MACT is the overall most stringent program. Therefore, fugitive emissions shall be monitored as required by this program (Louisiana Refinery MACT).

Unit or Plant Site	Program Being Streamlined	Stream Applicability	Overall Most Stringent Program
CLAW Area	Louisiana Refinery MACT	≥ 5% VOHAP	Louisiana Refinery MACT
	40 CFR 63 Subpart CC	≥ 5% VOHAP	
	40 CFR 60 Subpart GGG	≥ 10% VOC	
	LAC 33:III.2122 – Fugitive Emission Control for Ozone Nonattainment Areas and Specified Parish	≥ 10% VOC	

MACT Requirements

The CLAW Area is a major source of toxic air pollutants. State Chapter 51 MACT Standards apply. CITGO meets MACT requirements by complying with the Louisiana Refinery MACT Determination through the Louisiana Fugitive Emission Consolidation program for the project fugitives.

Air Quality Analysis

Impact on air quality from the emission of the proposed operating area will be below the National Ambient Air Quality Standards (NAAQS) and the Louisiana Ambient Air Standards (AAS) beyond the industrial property. Results of the air dispersion modeling are below.

Pollutant	Time Period	Calculated Maximum Ground Level Concentration ($\mu g/m^3$)	Louisiana Toxic Air Pollutant Ambient Air Quality Standard or (National Ambient Air Quality Standard {NAAQS})
NO_X	Annual	84.22	(100)
SO_2	3-hour	920.04	(1300)
	24-hour	258.31	(365)
	Annual	47.21	(80)

General Condition XVII Activities

The facility will comply with the applicable General Condition XVII Activities emissions as required by the operating permit rule. However, General Condition XVII Activities are not subject to testing, monitoring, reporting or recordkeeping requirements. For a list of approved General Condition XVII Activities, refer to the Section VIII – General Condition XVII Activities of the proposed permit.

Insignificant Activities

All Insignificant Activities are authorized under LAC 33:III.501.B.5. For a list of approved Insignificant Activities, refer to the Section IX – Insignificant Activities of the proposed permit.

V. PERMIT SHIELD

CITGO requests the following permit shields per 40 CFR 60.6(f) and LAC 33:III.507.I: Fugitive Emission Monitoring, 905 Shield, Annual Reporting, Renewal Application, and Process Drain.

Fugitive Emission Monitoring
Compliance with the requirements of the monitoring program identified in the Site Source Agreement for Consolidation of the LCMC Fugitive Emission Monitoring Program (as reflected in the Part 70 specific permit conditions) constitutes full compliance for all applicable fugitive emissions programs being consolidated. The applicable regulations are as listed in the Stringency Table in the Louisiana Fugitive Emissions Program Consolidation Guidelines.

905 Shield
Where a specific regulatory work practice or operational standard applies to an affected facility, compliance with the applicable regulatory work practice or operational standard demonstrates compliance with LAC 33:III.905.

Annual Reporting Shield
Semi-annual reporting periods required by 40 CFR Part 63 Subpart G (HON) and 40 CFR Subpart CC (MRACT) will be on a calendar basis (January 1 through June 30 and July 1 through December 31) for consistency with Title V reporting schedule as allowed by 40 CFR 63.10(a)(5) and 40 CFR 60.19(C)-(e).

Renewal Application Shield
If the permittee (CITGO) submits a timely and complete application for renewal, the existing permit will be considered as administratively continued per La. R.S. 30:2023.C and La. R.S. 49:691.B. In such case, the terms and conditions of this permit shall remain in force until a final permit decision for permit renewal or denial. This protection shall cease to apply if, subsequent to the completeness determination required pursuant to LAC 33:III.519.A, and is required by LAC 33:III.591.B, the applicant fails to submit by the deadline specified in writing by the permitting authority any additional information identified as being needed to process the application.

Process Drain Shield
Process drains subject to LAC 33:III.2122 and either 40 CFR 60 Subpart QQQ, 40 CFR 61 Subpart FF or 4CFR 63 Subpart CC shall demonstrate compliance with LAC 33:III.2122 by meeting the applicable control, inspection and repair requirements of 40 CFR 60 Subpart QQQ, 40 CFR 61 Subpart FF or 40 CFR 63 CC.

VI. PERIODIC MONITORING

All periodic monitoring is conducted in accordance with state and federal regulations. See the Facility Specific Requirements Section of the draft permit, or where provided, Table 3 of the draft Part 70 permit for monitoring requirements.

VII. GLOSSARY

Carbon Monoxide (CO) – A colorless, odorless gas, which is an oxide of carbon.

Maximum Achievable Control Technology (MACT) – The maximum degree of reduction in emissions of each air pollutant subject to LAC 33:III.Chapter 51 (including a prohibition on such emissions, where achievable) that the administrative authority, upon review of submitted MACT compliance plans and other relevant information and taking into consideration the cost of achieving such emission reduction, as well as any non-air-quality health and environmental impacts and energy requirements, determines is achievable through application of measures, processes, methods, systems, or techniques.

Hydrogen Sulfide (H_2S) – A colorless inflammable gas having the characteristic odor of rotten eggs, and found in many mineral springs. It is produced by the reaction of acids on metallic sulfides, and is an important chemical reagent.

New Source Review (NSR) – A preconstruction review and permitting program applicable to new or modified major stationary sources of air pollutants regulated under the Clean Air Act (CAA). NSR is required by Parts C ("Prevention of Significant Deterioration of Air Quality") and D ("Nonattainment New Source Review").

Nitrogen Oxides (NO_X) – Compounds whose molecules consist of nitrogen and oxygen.

Organic Compound – Any compound of carbon and another element. Examples: Methane (CH_4), Ethane (C_2H_6), Carbon Disulfide (CS_2)

Part 70 Operating Permit – Also referred to as a Title V permit, required for major sources as defined in 40 CFR 70 and LAC 33:III.507. Major sources include, but are not limited to, sources which have the potential to emit: $\geq$ 10 tons per year of any toxic air pollutant; $\geq$ 25 tons of total toxic air pollutants; and $\geq$ 100 tons per year of regulated pollutants (unless regulated solely under 112(r) of the Clean Air Act) (25 tons per year for sources in non-attainment parishes).

PM_{10} – Particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers as measured by the method in Title 40, Code of Federal Regulations, Part 50, Appendix J.

Potential to Emit (PTE) – The maximum capacity of a stationary source to emit any air pollutant under its physical and operational design.

Prevention of Significant Deterioration (PSD) – A New Source Review permitting program for major sources in geographic areas that meet the National Ambient Air Quality Standards (NAAQS) at 40 CFR Part 50. PSD requirements are designed to ensure that the air quality in attainment areas will not degrade.

Sulfur Dioxide (SO_2) – An oxide of sulfur.

Sulfuric Acid (H_2SO_4) – A highly corrosive, dense oily liquid. It is a regulated toxic air pollutant under LAC 33:III.Chapter 51.

Title V Permit – See Part 70 Operating Permit.

Volatile Organic Compound (VOC) – Any organic compound, which participates in atmospheric photochemical reactions; that is, any organic compound other than those, which the administrator of the U.S. Environmental Protection Agency designates as having negligible photochemical reactivity.